

Mr. Steve Aldrige
Knauf Fiber Glass GmbH
240 Elizabeth Street
Shelbyville, IN 46176

Re: **145-11969**
First Significant Permit Modification to
Part 70 T145-6038-00001

Dear Mr. Aldrige :

Knauf Fiber Glass GmbH was issued a permit on September 14, 1999 for a stationary wool fiberglass insulation manufacturer. A letter requesting changes to this permit was received on March 3, 2000. Pursuant to the provisions of 326 IAC 2-7-12 a significant permit modification to this permit is hereby approved as described in the attached Technical Support Document.

- (a) Condition B. 24 (Inspection and Entry), has been clarified to amend the introductory paragraph to insert information pertaining to source confidentiality, and to remove subparagraphs (e)(1) and (2).
- (b) Condition C.6 (Operation of Equipment) has been modified for clarification.
- (c) Condition D.1.2 (Emission Limitation) has been modified to require a more stringent limitation regarding the use of recycled glass in its mixed batch formulation for Furnace 605.
- (d) Preventive maintenance plans are not only applicable to the control devices, but to the facilities. However, upon evaluation there are no preventive maintenance actions that apply to the facilities listed in Conditions D.1.3, D.2.2, and D.3.2 (Preventive Maintenance Plan). Therefore, these conditions have been modified to require Preventive Maintenance Plans for the control devices and not the facilities.
- (e) Condition D.1.7 (Parametric Monitoring) has been modified to amend "instrument" to "instruments".
- (f) The operations conducted at the source cannot, by virtue of their design, comply with Condition D.1.9 (Broken or Failed Wet Scrubbers and/or Electrostatic Precipitators Detection), which requires the immediate shutdown of affected units in the event of wet scrubbers and/or electrostatic precipitators failure. The compliance monitoring plan, when approved by IDEM, OAM, will satisfy all compliance response steps for these units. Therefore, the permit has been modified to state that the Compliance Response Plan will be followed in the event of broken or failed wet scrubbers and/or electrostatic precipitators and to remove subparagraphs (a) and (b).
- (g) The operations conducted at the source cannot, by virtue of their design, comply with Condition D.2.8 (Broken or Failed Dust Collector Detection), which requires the immediate shutdown of affected units in the event of a dust collector failure. The compliance monitoring plan, when approved by IDEM, OAM, will satisfy all compliance response steps for these units. Therefore, the permit has been modified to state that the Compliance Response Plan will be followed in the event of a broken or failed dust collector and to remove subparagraphs (a) and (b).
- (h) Condition D.2.9 (Record Keeping Requirements) has been modified to remove record keeping requirements that are not required for this facility.

- (i) The emission units do not exhaust to the interior of the building, therefore the statement requiring that "A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter" has been deleted from the condition.
- (j) The source is not required by Condition D.2.6 to conduct monitoring of the cleaning cycle for each dust collector on the fiberglass trimming operation used in conjunction with the nine (9) fiberglass pipe insulation production lines. Therefore, Condition D.2.9(b)(2) has been removed from the permit.
- (k) The operations conducted at the source cannot, by virtue of their design, comply with Condition D.3.7 (Broken or Failed Bag Detection), which requires the immediate shutdown of affected units in the event of broken or failed bag detection. The compliance monitoring plan, when approved by IDEM, OAM, will satisfy all compliance response steps for these units. Therefore, the permit has been modified to state that the Compliance Response Plan will be followed in the event of broken or failed bag detection and to remove subparagraphs (a) and (b).

All other conditions of the permit shall remain unchanged and in effect. Please attach a copy of this modification and the following revised permit pages to the front of the original permit.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact Phillip Ritz, c/o OAM, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, or call (800) 451-6027, press 0 and ask for extension (3-6878), or dial (973) 575-2555, extension 3241.

Sincerely,

Paul Dubenetzky, Chief
Permits Branch
Office of Air Management

Attachments
PR/EVP

cc: File - Shelby County
U.S. EPA, Region V
Shelby County Health Department
Air Compliance Section Inspector - D. J. Knotts
Compliance Data Section - Karen Nowak
Administrative and Development - Janet Mobley
Technical Support and Modeling - Michelle Boner

PART 70 OPERATING PERMIT OFFICE OF AIR MANAGEMENT

**Knauf Fiber Glass GmbH
240 Elizabeth Street
Shelbyville, Indiana 46176**

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 and 326 IAC 2-1-3.2 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

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|---|--|
| Operation Permit No.: T145-6038-00001 | |
| Issued by: Janet G. McCabe, Assistant Commissioner Office of Air Management | Issuance Date: September 14, 1999 |
| First Significant Permit Modification: 145-11969 | Pages Affected: 17, 19, 30, 31, 32, 34, 35, 38 and 39 |
| Issued by: Paul Dubenetzky, Branch Chief Office of Air Management | Issuance Date: |

subject to the constraints of Section (a) of this condition and those in 326 IAC 2-7-20(c).

- (d) Alternative Operating Scenarios [326 IAC 2-7-20(d)]
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-7-5(9). No prior notification of IDEM, OAM, or U.S. EPA is required.
- (e) Backup fuel switches specifically addressed in, and limited under, Section D of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.

B.23 Construction Permit Requirement [326 IAC 2]

Except as allowed by Indiana P.L. 130-1996 Section 12, as amended by P.L. 244-1997, modification, construction, or reconstruction shall be approved as required by and in accordance with 326 IAC 2.

B.24 Inspection and Entry [326 IAC 2-7-6(2)]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAM, U.S. EPA, or an authorized representative to perform the following:

- (a) Enter upon the Permittee's premises where a Part 70 source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- (c) Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;
- (d) Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) Utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.
[326 IAC 2-7-6(6)]

SECTION C

SOURCE OPERATION CONDITIONS

| |
|---------------|
| Entire Source |
|---------------|

Emission Limitations and Standards [326 IAC 2-7-5(1)]

- C.1 Particulate Matter Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) pounds per hour [326 IAC 6-3-2(c)]
Pursuant to 326 IAC 6-3-2(c), the allowable particulate matter emissions rate from any process not already regulated by 326 IAC 6-1 or any New Source Performance Standard, and which has a maximum process weight rate less than 100 pounds per hour shall not exceed 0.551 pounds per hour.
- C.2 Opacity [326 IAC 5-1]
Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in this permit:
- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period, as determined in 326 IAC 5-1-4.
 - (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.
- C.3 Open Burning [326 IAC 4-1] [IC 13-17-9]
The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1. 326 IAC 4-1-3 (a)(2)(A) and (B) are not federally enforceable.
- C.4 Incineration [326 IAC 4-2][326 IAC 9-1-2]
The Permittee shall not operate an incinerator or incinerate any waste or refuse except as provided in 326 IAC 4-2 and 326 IAC 9-1-2.
- C.5 Fugitive Dust Emissions [326 IAC 6-4]
The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.
- C.6 Operation of Equipment [326 IAC 2-7-6(6)]
Except as otherwise provided in this permit, all air pollution control equipment listed in this permit and used to comply with an applicable requirement shall be operated at all times that the emission units vented to the control equipment are in operation.
- C.7 Stack Height [326 IAC 1-7]
The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted.

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.1.1 Particulate Matter Emission Limitation [326 IAC 12 (40 CFR 60.290, Subpart CC)]

Pursuant to 326 IAC 12 (40 CFR 60.290, Subpart CC) "Standard of Performance for Glass Manufacturing Plants", the particulate matter emissions from the one (1) gas-fired (with electric boost) glass melting furnace (FURN 602) shall be limited to 0.25 grams of particulate per kg of glass produced.

D.1.2 Emission Limitation [326 IAC 11-4-4]

Pursuant to 326 IAC 11-4-4 (Fiberglass Insulation Manufacturing - Emission Limitation), emission limitations for particulate matter have been set forth in Indiana's State Implementation Plan (SIP) as follows:

| Process/Facility | Max. Hourly Emissions (lbs/hour) | Max. Yearly Emissions (tons/yr) |
|--|-------------------------------------|------------------------------------|
| MFG 601 forming + oven (formerly 602 forming plus oven) | 28.28 | 123.9 |
| MFG 602 forming + oven (formerly 602 forming plus oven) | 33.27 | 145.7 |
| MFG 603 forming + oven (formerly 603 forming plus oven) | 16.49 | 72.2 |
| FURN 605 furnace (formerly 204 furnace) | 10.00 | 43.8 |
| MFG 605 forming (formerly 204 forming) | 15.00 | 65.7 |
| MFG 605 oven (formerly 204 oven) | 8.00 | 35.0 |

The Permittee is required to use at least 70% post-consumer recycled glass in its mixed batch formulation for Furnace 605, unless the Permittee demonstrates to IDEM, OAM's satisfaction that Furnace 605 can achieve compliance with its particulate emission limit using a lesser amount of post-consumer recycled glass.

D.1.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the control devices described in Section D.1.1.

Compliance Determination Requirements

D.1.4 Testing Requirements [326 IAC 2-7-6(1),(6)]

During the period between 30 and 36 months after issuance of this permit, the Permittee shall perform PM testing on the facilities described under Section D.1(b), (c), (d), (e), (f), (g), and (h) utilizing the procedures set forth in 40 CFR 60, Appendix A, Methods 1-5 or other methods as approved by the Commissioner. This test shall be repeated at least once every two (2) years from the date of this valid compliance demonstration. In addition to these requirements, IDEM may require compliance testing when necessary to determine if the facility is in compliance.

D.1.5 Particulate Matter (PM)

The wet electrostatic precipitator (for MFG 601 and 602), wet scrubber (for MFG 603), and the dry electrostatic precipitator (for FURN 602) for PM control shall be in operation at all times when MFG 601, 602, 603 and FURN 602 are in operation and exhausting to the outside atmosphere.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.1.6 Visible Emissions Notations

- (a) Daily visible emission notations of all manufacturing line stack exhausts shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

D.1.7 Parametric Monitoring

- (a) The Permittee shall record the total gas pressure drop across the wet scrubber used in conjunction with the manufacturing line (MFG 603), at least once daily when the manufacturing line (MFG 603) is in operation. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the wet scrubber shall be maintained at not less than 10.0 inches of water or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.
- (b) The Permittee shall record the total secondary voltage across each of the wet electrostatic precipitators used in conjunction with the manufacturing lines (MFG 601 and 602), at least once daily when the manufacturing lines (MFG 601 and 602) are in operation. The Compliance Response Plan for these units shall establish the appropriate ranges and shall contain troubleshooting contingency and response steps for when the voltage reading is outside of the stated ranges for any one reading.
- (c) The Permittee shall record the total secondary voltage across the dry electrostatic precipitator used in conjunction with FURN 602, at least once daily when FURN 602 is in operation. The Compliance Response Plan for these units shall establish the appropriate ranges and shall contain troubleshooting contingency and response steps for when the voltage reading is outside of the stated ranges for any one reading.

The instruments used for determining the pressure and voltage shall comply with Section C - Pressure Gauge Specifications, of this permit, shall be subject to approval by IDEM, OAM, and shall be calibrated quarterly.

D.1.8 Wet Scrubber and Electrostatic Precipitator Inspections

An inspection shall be performed each calendar quarter of all scrubbers and electrostatic precipitators controlling manufacturing lines (MFG 601, 602, 603) and FURN 602.

D.1.9 Broken or Failed Wet Scrubbers and/or Electrostatic Precipitators Detection

In the event that wet scrubbers and/or electrostatic precipitators failure has been observed, the Permittee shall take appropriate response steps in accordance with its Compliance Response Plan.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.1.10 Record Keeping Requirements

- (a) To document compliance with Condition D.1.6, the Permittee shall maintain records of daily visible emission notations of the manufacturing lines (MFG 601-605) stack exhaust.
- (b) To document compliance with Condition D.1.7, the Permittee shall maintain the following:
 - (1) Daily records of the following operational parameters during normal operation:
 - (A) Daily differential static pressure; and
 - (B) Daily secondary voltage readings.
 - (2) Documentation of all response steps implemented, per event .
- (d) To document compliance with Condition D.1.8, the Permittee shall maintain records of the results of the inspections required under Condition D.1.8.
- (e) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.11 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.1.1 and D.1.2 shall be submitted to the address listed in Section C - General Reporting Requirements, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.

SECTION D.2

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

Nine (9) fiberglass pipe insulation production lines consisting of nine (9) natural gas fired curing ovens, identified as Unit ID # LINE 3001 - 3009, respectively, each with a maximum heat input capacity of 5 MMBtu per hour, each exhausting through two (2) stacks ID # 7-2 and 7-3, 8-2 and 8-3, 9-2 and 9-3, 10-2 and 10-3, 11-2 and 11-3, 12-2 and 12-3, 13-2 and 13-3, 14-2 and 14-3, and 16-2 and 16-3, respectively, each with a trimming process utilizing a dust collector for particulate control, each exhausting through stack ID # 7-4, 8-4, 9-4, 10-4, 11-4, 12-4, 13-4, 14-4, and 16-4, respectively; LINE 3001-3005 and 3008 each constructed in April 1996, LINE 3006-3007 each constructed in December 1994, and LINE 3009 constructed October 1997.

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.2.1 Particulate Matter Limitation (PM) [326 IAC 12 (40 CFR 60.680)]

Pursuant to 326 IAC 12 (40 CFR 40 CFR 60.680, Subpart PPP) "Standard of Performance for Wool Fiberglass Insulation Manufacturing Plants", the particulate matter emissions from the nine (9) fiberglass pipe insulation production lines shall be limited to 5.5 kg/Mg (11.0 lb/ton) of glass pulled.

D.2.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these control devices.

Compliance Determination Requirements

D.2.3 Testing Requirements [326 IAC 2-7-6(1),(6)]

During the period between 30 and 36 months after issuance of this permit, the Permittee shall perform PM testing on 3001-3009 oven inlet and outlet utilizing the procedures set forth in 40 CFR 60 or other methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. In addition to these requirements, IDEM may require compliance testing when necessary to determine if the facility is in compliance.

D.2.4 Particulate Matter (PM)

Each dust collector for PM control on the fiberglass trimming process shall be in operation at all times when the its fiberglass pipe insulation production line is in operation.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.2.5 Visible Emissions Notations

- (a) Daily visible emission notations of the nine (9) fiberglass pipe insulation production lines stack exhaust shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

D.2.6 Parametric Monitoring

The Permittee shall record the leak detector picoampere (pA) for each dust collector on the fiberglass trimming operation used in conjunction with the nine (9) fiberglass pipe insulation production lines, at least once daily when the nine (9) fiberglass production lines are in operation. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, leak detectors will be operated at a maximum set point of 11 pA or a range established during a stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pA display reading is outside of the above mentioned range for any one reading.

D.2.7 Dust Collector Inspections

An inspection shall be performed each calendar quarter of all dust collectors controlling the nine (9) fiberglass pipe insulation production lines.

D.2.8 Broken or Failed Dust Collector Detection

In the event that dust collector failure has been observed the Permittee shall take appropriate response steps in accordance with its Compliance Response Plan.

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.2.9 Record Keeping Requirements

- (a) To document compliance with Condition D.2.4, the Permittee shall maintain records of daily visible emission notations of the nine (9) fiberglass pipe insulation production lines taken in accordance with Condition D.2.5.
- (b) To document compliance with Condition D.2.6, the Permittee shall maintain the following:
 - (1) Daily records of picoampere readings.
 - (2) Documentation of all response steps implemented, per event.
- (c) To document compliance with Condition D.2.7, the Permittee shall maintain records of the results of the inspections required under Condition D.2.7.
- (d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

Interpolation and extrapolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67}$$

where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

D.3.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this control device.

Compliance Determination Requirements

D.3.3 Testing Requirements [326 IAC 2-7-6(1),(6)]

The Permittee is not required to test these facilities by this permit. However, IDEM may require compliance testing at any specific time when necessary to determine if the facility is in compliance. If testing is required by IDEM, compliance with the PM limit specified in Condition D.3.1 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

D.3.4 Particulate Matter (PM)

The baghouse for PM control shall be in operation at all times when the eight (8) silos, one (1) batch raw material receiving bin and the five (5) day bins are in operation and exhausting to the outside atmosphere.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.3.5 Visible Emissions Notations

- (a) Daily visible emission notations of the eight (8) silos, one (1) batch raw material receiving bin and the five (5) day bins stack exhaust shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

D.3.6 Baghouse Inspections

An inspection shall be performed each calendar quarter of all bags controlling the eight (8) silos, one (1) batch raw material receiving bin and the five (5) day bins when venting to the atmosphere. All defective bags shall be replaced.

D.3.7 Broken or Failed Bag Detection

In the event that bag failure has been observed the Permittee shall take appropriate response steps in accordance with its Compliance Response Plan.

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.3.8 Record Keeping Requirements

- (a) To document compliance with Condition D.3.4, the Permittee shall maintain records of daily visible emission notations of the eight (8) silos, one (1) batch raw material receiving bin and the five (5) day bins stack exhaust.
- (b) To document compliance with Condition D.3.6, the Permittee shall maintain records of the results of the inspections required under Condition D.3.6 and the dates the vents are redirected.
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

Indiana Department of Environmental Management Office of Air Management

Addendum to the Technical Support Document (TSD) for a Significant Permit Modification to a Part 70 Operating Permit

| | |
|---------------------------------|--|
| Source Name: | Knauf Fiber Glass GmbH |
| Source Location: | 240 Elizabeth Street, Shelbyville, Indiana 46176 |
| County: | Shelby |
| SIC Code: | 3296 |
| Operation Permit No.: | T145-6038-00001 |
| Operation Permit Issuance Date: | September 14, 1999 |
| Permit Modification No.: | 145-11969-00001 |
| Permit Reviewer: | Phillip Ritz/EVP |

On May 6, 2000, the Office of Air Management (OAM) had a notice published in the Shelbyville News, Shelbyville, Indiana, stating that Knauf Fiber Glass GmbH had applied for a Significant Permit Modification to a Part 70 Operating Permit to incorporate changes due to an appeal resolution. The notice also stated that OAM proposed to issue a Significant Permit Modification for these changes and provided information on how the public could review the proposed Significant Permit Modification and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this Significant Permit Modification should be issued as proposed.

On June 7, 2000, Guinn P. Doyle of Barnes & Thornburg submitted comments on behalf of Knauf Fiber Glass GmbH on the proposed Significant Permit Modification to a Part 70 Operating Permit. The summary of the comment and corresponding response is as follows:

Comment

Condition D.2.6 concerns parametric monitoring and requires that the Permittee "shall record the leak detector picoamperes (pA) for each dust collector." The dust collection devices do not go through "cleaning cycles" and therefore the requirements to keep records of the cleaning cycling is inappropriate. The only monitoring required is for leak detection, which is the daily record of the picoamperes readings. Therefore, D.2.9(b)(2) should be deleted from the permit.

Response

The source is not required by Condition D.2.6 to conduct monitoring of the cleaning cycle for each dust collector on the fiberglass trimming operation used in conjunction with the nine (9) fiberglass pipe insulation production lines. Therefore, Condition D.2.9(b)(2) has been removed from the permit and the remaining conditions renumbered as follows:

D.2.9 Record Keeping Requirements

-
- (a) To document compliance with Condition D.2.4, the Permittee shall maintain records of daily visible emission notations of the nine (9) fiberglass pipe insulation production lines taken in accordance with Condition D.2.5.
 - (b) To document compliance with Condition D.2.6, the Permittee shall maintain the following:
 - (1) Daily records of picoampere readings.
 - (2) ~~Daily records of the following operational parameters during normal operation:-~~

~~(A)~~ ~~Cleaning cycle: frequency and differential pressure~~

~~(3)~~(2) Documentation of all response steps implemented, per event .

~~(b)~~(c) To document compliance with Condition D.2.7, the Permittee shall maintain records of the results of the inspections required under Condition D.2.7.

~~(e)~~(d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

Indiana Department of Environmental Management Office of Air Management

Technical Support Document (TSD) for a Significant Permit Modification to a Part 70 Operating Permit

Source Background and Description

| | |
|--|---|
| Source Name: | Knauf Fiber Glass GmbH |
| Source Location: | 240 Elizabeth Street, Shelbyville, Indiana 46176 |
| County: | Shelby |
| SIC Code: | 3296 |
| Operation Permit No.: | T145-6038-00001 |
| Operation Permit Issuance Date: | September 14, 1999 |
| Permit Modification No.: | 145-11969-00001 |
| Permit Reviewer: | Phillip Ritz/EVP |

The Office of Air Management (OAM) has reviewed a modification application from Knauf Fiber Glass GmbH relating to the incorporation of a Part 70 permit appeal resolution for a stationary wool fiberglass insulation manufacturer.

History

Knauf Fiber Glass GmbH appealed their TV issued on September 14, 1999. As a result to the appeal resolution, the modifications result in a significant change in existing Part 70 monitoring terms or conditions, therefore, these changes are being incorporated into the Part 70 Permit pursuant to 326 IAC 2-7-12(d)(1). The changes proposed to the Part 70 permit are located at the end of this document.

Existing Approvals

The source was issued a Part 70 Operating Permit T145-6038-00001 on September 14, 1999.

Enforcement Issue

There are no enforcement actions pending.

Recommendation

The staff recommends to the Commissioner that the Significant Permit Modification be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on March 3, 2000.

Emission Calculations

No emission calculations were required for this modification.

County Attainment Status

The source is located in Shelby County.

| Pollutant | Status |
|-----------------|------------|
| PM-10 | attainment |
| SO ₂ | attainment |
| NO ₂ | attainment |
| Ozone | attainment |
| CO | attainment |
| Lead | attainment |

- (a) Volatile organic compounds (VOC) and oxides of nitrogen (NO_x) are precursors for the formation of ozone. Therefore, VOC and NO_x emissions are considered when evaluating the rule applicability relating to the ozone standards. Shelby County has been designated as attainment or unclassifiable for ozone.

Federal Rule Applicability

- (a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this modification.
- (b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to this modification.

State Rule Applicability - Entire Source

There are no new State Rules for the entire source applicable to this modification. All State Rules listed in the Part 70 Operating Permit T145-6038-00001, issued on September 14, 1999, continue to apply to the source.

State Rule Applicability - Individual Facilities

There are no new State Rules for individual facilities applicable to this modification. All State Rules listed in the Part 70 Operating Permit T145-6038-00001, issued on September 14, 1999, continue to apply to the individual facilities.

Compliance Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAM, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance monitoring requirements applicable to this source are as follows:

- (a) Daily visible emission notations of the eight (8) silos, one (1) batch raw material receiving bin and the five (5) day bins stack exhaust shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal. For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.
- (b) An inspection shall be performed each calendar quarter of all bags controlling the eight (8) silos, one (1) batch raw material receiving bin and the five (5) day bins when venting to the atmosphere. All defective bags shall be replaced.
- (c) In the event that bag failure has been observed the Permittee shall take appropriate response steps in accordance with its Compliance Response Plan.

These monitoring conditions are necessary because the baghouse for the eight (8) silos (SILO 01-08) and five (5) day bins (DB01-05) must operate properly to ensure compliance with 326 IAC 2-7 (Part 70) and 326 IAC 6-3 (Process Operations).

Air Toxic Emissions

Indiana presently requests applicants to provide information on emissions of the 188 hazardous air pollutants (HAPs) set out in the Clean Air Act Amendments of 1990. These pollutants are either carcinogenic or otherwise considered toxic and are commonly used by industries. They are listed as air toxics on the Office of Air Management (OAM) Part 70 Application Form GSD-08.

None of the listed air toxics will be emitted from this modification.

Changes Proposed

The following changes have been made to the Part 70 Permit with the approval of the OAM Air Compliance Section:

- (a) Condition B. 24 (Inspection and Entry), has been clarified to amend the introductory paragraph to insert information pertaining to source confidentiality, and to remove subparagraphs (e)(1) and (2).

B.24 Inspection and Entry [326 IAC 2-7-6(2)]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, **and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such**, the Permittee shall allow IDEM, OAM, U.S. EPA, or an authorized representative to perform the following:

- (a) Enter upon the Permittee's premises where a Part 70 source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- (c) Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;
- (d) Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) Utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.
[326 IAC 2-7-6(6)]

~~(1) The Permittee may assert a claim that, in the opinion of the Permittee, information removed or about to be removed from the source by IDEM, OAM, or an authorized representative, contains information that is confidential under IC 5-14-3-4(a). The claim shall be made in writing before or at the time the information is removed from the source. In the event that a claim of confidentiality is so asserted, neither IDEM, OAM, nor an authorized representative, may disclose the information unless and until IDEM, OAM makes a determination under 326 IAC 17-1-7 through 326 IAC 17-1-9 that the information is not entitled to confidential treatment and that determination becomes final. [IC 5-14-3-4; IC 13-14-11-3; 326 IAC 17-1-7 through 326 IAC 17-1-9]~~

~~(2) The Permittee, and IDEM, OAM acknowledge that the federal law applies to claims of confidentiality made by the Permittee with regard to information removed or about to be removed from the source by U.S. EPA. [40 CFR Part 2, Subpart B]~~

- (b) Condition C.6 (Operation of Equipment) has been modified as follows:

C.6 Operation of Equipment [326 IAC 2-7-6(6)]

Except as otherwise provided in this permit, all air pollution control equipment listed in this permit and used to comply with an applicable requirement shall be operated at all times that the emission units vented to the control equipment are in operation.

- (c) Condition D.1.2 (Emission Limitation) has been modified to require a more stringent limitation regarding the use of recycled glass in its mixed batch formulation for Furnace 605. The changes are as follows to state that the source is required to use at least 70% post-consumer recycled glass:

The Permittee is required to use at least ~~50~~ **70%** post-consumer recycled glass in its mixed

batch formulation for Furnace 605, unless the Permittee demonstrates to IDEM, OAM's satisfaction that Furnace 605 can achieve compliance with its particulate emission limit using a lesser amount of post-consumer recycled glass.

- (d) Preventive maintenance plans are not only applicable to the control devices, but to the facilities. However, upon evaluation there are no preventive maintenance actions that apply to the facilities listed in Conditions D.1.3, D.2.2, and D.3.2 (Preventive Maintenance Plan). Therefore, these conditions have been modified as follows to require Preventive Maintenance Plans for the control devices and not the facilities:

D.1.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for ~~these facilities~~ **the control devices** described in Section D.1.1 ~~and their control devices~~.

D.2.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these ~~facilities and~~ control devices.

D.3.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for ~~these facilities and their~~ **this** control device.

- (e) Condition D.1.7 (Parametric Monitoring) has been modified as follows to amend "instrument" to "instruments":

D.1.7 Parametric Monitoring

- (a) The Permittee shall record the total gas pressure drop across the wet scrubber used in conjunction with the manufacturing line (MFG 603), at least once daily when the manufacturing line (MFG 603) is in operation. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the wet scrubber shall be maintained at not less than 10.0 inches of water or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.
- (b) The Permittee shall record the total secondary voltage across each of the wet electrostatic precipitators used in conjunction with the manufacturing lines (MFG 601 and 602), at least once daily when the manufacturing lines (MFG 601 and 602) are in operation. The Compliance Response Plan for these units shall establish the appropriate ranges and shall contain troubleshooting contingency and response steps for when the voltage reading is outside of the stated ranges for any one reading.
- (c) The Permittee shall record the total secondary voltage across the dry electrostatic precipitator used in conjunction with FURN 602, at least once daily when FURN 602 is in operation. The Compliance Response Plan for these units shall establish the appropriate ranges and shall contain troubleshooting contingency and response steps for when the voltage reading is outside of the stated ranges for any one reading.

The instruments used for determining the pressure and voltage shall comply with Section C - Pressure Gauge Specifications, of this permit, shall be subject to approval by IDEM, OAM, and shall be calibrated quarterly.

- (f) The operations conducted at the source cannot, by virtue of their design, comply with Condition D.1.9 (Broken or Failed Wet Scrubbers and/or Electrostatic Precipitators Detection), which requires the immediate shutdown of affected units in the event of wet scrubbers and/or electrostatic precipitators failure. The compliance monitoring plan, when approved by IDEM,

OAM, will satisfy all compliance response steps for these units. Therefore, the permit has been modified as follows to state that the Compliance Response Plan will be followed in the event of broken or failed wet scrubbers and/or electrostatic precipitators and to remove subparagraphs (a) and (b):

D.1.9 Broken or Failed Wet Scrubbers and/or Electrostatic Precipitators Detection

In the event that wet scrubbers and/or electrostatic precipitators failure has been observed, **the Permittee shall take appropriate response steps in accordance with its Compliance Response Plan.**

- ~~(a) The affected units will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).~~
- ~~(b) For scrubbers and/or electrostatic precipitators, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).~~
- (g) The operations conducted at the source cannot, by virtue of their design, comply with Condition D.2.8 (Broken or Failed Dust Collector Detection), which requires the immediate shutdown of affected units in the event of a dust collector failure. The compliance monitoring plan, when approved by IDEM, OAM, will satisfy all compliance response steps for these units. Therefore, the permit has been modified as follows to state that the Compliance Response Plan will be followed in the event of a broken or failed dust collector and to remove subparagraphs (a) and (b):

D.2.8 Broken or Failed Dust Collector Detection

In the event that dust collector failure has been observed **the Permittee shall take appropriate response steps in accordance with its Compliance Response Plan.**

- ~~(a) The affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).~~
- ~~(b) For dust collector, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).~~
- (h) Condition D.2.9 (Record Keeping Requirements) has been modified as follows to remove record keeping requirements that are not required for this facility:

D.2.9 Record Keeping Requirements

- (a) To document compliance with Condition D.2.4, the Permittee shall maintain records of daily visible emission notations of the nine (9) fiberglass pipe insulation production lines taken in accordance with Condition D.2.5.
- (b) To document compliance with Condition D.2.6, the Permittee shall maintain the following:
 - (1) Daily records of picoampere readings.
 - (2) Daily records of the following operational parameters during normal operation:
 - (A) Cleaning cycle: frequency and differential pressure
 - (3) Documentation of all response steps implemented, per event .
 - (4) ~~Operation and preventive maintenance logs, including work purchases orders, shall be maintained.~~
 - (5) ~~Quality Assurance/Quality Control (QA/QC) procedures or its equivalent.~~
 - (6) ~~Operator standard operating procedures (SOP) or its equivalent.~~
 - (7) ~~Manufacturer's specifications or its equivalent.~~
 - (8) ~~Equipment "troubleshooting" contingency plan.~~
 - (9) ~~Documentation of the dates vents are redirected.~~
- (b) To document compliance with Condition D.2.7, the Permittee shall maintain records of the results of the inspections required under Condition D.2.7.
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.
- (i) The emission units do not exhaust to the interior of the building, therefore the statement requiring that "A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter" has been deleted from the condition as follows:

D.3.6 Baghouse Inspections

- An inspection shall be performed each calendar quarter of all bags controlling the eight (8) silos, one (1) batch raw material receiving bin and the five (5) day bins when venting to the atmosphere. ~~A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter.~~ All defective bags shall be replaced.
- (j) The operations conducted at the source cannot, by virtue of their design, comply with Condition D.3.7 (Broken or Failed Bag Detection), which requires the immediate shutdown of affected units in the event of broken or failed bag detection. The compliance monitoring plan, when approved by IDEM, OAM, will satisfy all compliance response steps for these units. Therefore, the permit has been modified as follows to state that the Compliance Response Plan will be followed in the event of broken or failed bag detection and to remove subparagraphs (a) and (b):

D.3.7 Broken or Failed Bag Detection

In the event that bag failure has been observed **the Permittee shall take appropriate response steps in accordance with its Compliance Response Plan.:**

- (a) ~~The affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) hours of the determination of failure,~~

~~response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B-- Emergency Provisions).~~

- ~~(b) — For single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B-- Emergency Provisions).~~

Conclusion

The operation of this stationary wool fiberglass insulation manufacturer shall be subject to the conditions of the attached proposed Significant Permit Modification No. 145-11969-00001.